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# Common Missouri Spiders



Dave Tylka



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**MARBLED SPIDER**  
*Araneus marmoreus*  
an orb weaver

 printed on recycled paper

**I**F I WERE to write the story of Missouri spiders in the style of a murder-mystery novel, it might be a best-seller. Picture a dark, eerie cellar or forest. The damsel spider lures her gentleman friend into her parlor-web and then promptly murders him with sharp fangs. This is the way of some spiders, minus the anthropomorphic tone, while other spider matings last a long time. Among the more than 35,000 species of spiders worldwide, each has its own peculiar story.

In the United States, we seem to see spiders as villains and take pains to avoid them. Only a few folk-beliefs show traces of regard or respect. As a child, I learned that it was unlucky to step on a crack or a spider. A college roommate of mine kept a tiny jumping spider in a small glass box because her family did so to bring their home good luck. "I don't ever kill a spider," an elderly Ozark man once said to me, "because my granddaddy told me it'll rain for weeks on end if you do."

Despite our squeamishness about them, spiders do not hold a loathsome reputation universally. In some parts of the world, people believe that giving a spider as a gift or meeting a spider will bring good fortune, a successful marriage, fair weather or raise the ghost of your grandparent.

A spider is not an insect. It has eight legs, no visible antennae and a two-piece body. Spiders, along with ticks, mites, harvestmen and scorpions, belong to the Class Arachnida. A spider has silk-spinning structures, called spinnerets, at the back end of its abdomen, and usually eight eyes of various sizes and shapes grace its face.

A spider's mouth parts, too, are different from an insect's. Instead of mandibles capable of chewing, spiders have fang-tipped jaws called chelicerae. With these, they pierce their prey and inject a toxic fluid that immobilizes it; digestive juices dissolve its internal tissues. The spider's small, tubelike mouth, aided by strong abdominal muscles, pumps and sucks the victim until it is a shriveled husk. A strong-jawed spider, like the yellow garden spider or the tarantula, often mashes its prey between its chelicerae while ejecting digestive juices over it.

Missouri is home to more than 300 species of spiders. Some individuals are the size of a pinhead and are easily overlooked. Others are surprisingly large, with a legspan of 4 or more inches. Size is helpful when determining the two suborders of spiders, though other characteristics are more diagnostic. The Orthognatha, which includes the tarantulas and trapdoor spiders, are generally large, with stout bodies, stout legs, and jaws that move vertically. They also tend to be long-lived, some up to 25 years. The Labidognatha, which includes garden spiders and orb weavers, generally have thinner bodies, spindly legs, and have jaws that move horizontally. The majority of spiders in Missouri belong to this suborder.

Spiders live in virtually every type of habitat in Missouri—and in staggering numbers. British arachnologists have estimated populations ranging from 11,000 spiders per acre in woodlands to more than 2½ million individuals in a grassland acre.

On agricultural lands, spiders are a boon, destroying huge numbers of crop-damaging insects. Since each spider

in a field may consume at least one insect per day, their cumulative effect on insect populations is significant.

All spiders are potential predators on many arthropods, especially the insects. Most prey upon grasshoppers, flies, moths, caterpillars, leafhoppers, some bees and ants, and other spiders.

The worst enemies of spiders usually are other spiders, but some insects, like the assassin bug and mud dauber wasp, prey upon them, as do bats, shrews and birds. Some orb weaving spiders construct a zig-zag pattern of silk, the stabilimentum, at the hub of their webs which, scientists hypothesize, may deter birds from flying into the silk structure. But it might also help birds locate an orb weaver in order to prey upon it.

With a few exceptions, Missouri spiders rarely live longer than a year. Some hibernate in winter under tree bark or rocks, or in cellars and attics, but many die within one warm season, leaving the future to an over-wintering brood of encased eggs. Spiderlings emerge in spring and summer from egg sacs suspended from vegetation or from flattened silk sacs constructed on leaves or in flower heads. Some spiders leave egg sacs in burrows under rocks, while others, such as wolf spiders, carry the nursery with them.

Young spiders travel by climbing to the tops of grass blades, fenceposts or shrubs, elevating their abdomens and throwing out silken threads. Caught by the air currents, the tiny arachnids appear to fly, although spiders never develop wings.

Spiders grow by molting, or ecdysis. In this process, the spider casts off its tight outer body cover—its exoskeleton—after secreting a new, larger one underneath. Spiderlings gradually develop into adults in this way. Some color patterns are peculiar to certain species when they are spiderlings and change as they approach adulthood. Few spiders molt after sexual maturity, but some, such as female tarantulas, do.

All spiders exhibit similar premolting behavior. They do not eat, become lethargic and retreat into silken molting quarters in a burrow, under a leaf or in a corner. The outer skeleton splits along the upper body portions and the spider gradually slips its body and legs from the old casing, much like taking off a skin-tight glove. The actual molting process varies among species and can take from less than 15 minutes to a full day. Molting spiders are particularly vulnerable; they are unable to move away or fight back because they must rest until their new exoskeleton hardens.

Identification of spider species is generally difficult for the novice and expert alike. Spider classification is based on external structures that include eye arrangement, number of hairs and claws on the legs and the complicated structure of reproductive organs. Understanding the specialized technical vocabulary in many spider keys often requires the assistance of a biologist. Luckily, many Missouri arachnids are distinctive in color, shape, size and habitat. The photographs and descriptions here should help you identify some of Missouri's more common spiders.

Your next woodland walk offers the opportunity to make peace with these interesting creatures so undeserving of their fearful reputations. After all, a spider acts as a spider would.

## MISSOURI TARANTULA

*Dugesia hentzi*

"Ordinary" Tarantulas, Family Theraphosidae

This hairy species is Missouri's largest spider. Female tarantulas average approximately 50mm in length, the males about 40mm. Body and legs are uniformly dark chocolate-brown, with reddish hairs on the carapace.

The tarantula's large size and shaggy appearance is frightening to many people, leading them to believe it has a ferocious nature. It actually is a shy creature, quick to evade humans. Tarantulas are typically at home in areas seldom frequented by people. They appear to prefer dry, rocky glades, where they spend their days in silk-lined burrows in abandoned rodent or reptile tunnels or in other natural cavities. Like many hunting spiders, tarantulas are active at night, when they hunt for insects such as crickets. In late summer and fall, south Missourians often see these large arachnids crossing roads. This wandering phenomenon has been documented in male tarantulas in Southern California, but it has not been studied in Missouri.

*Missouri Distribution:* The tarantula occurs typically in open, dry glades in south and central Missouri. The Missouri River presumably acts as a barrier to the spider's movement into northern Missouri.



Tom R. Johnson

A sheet-web weaver, Family Linyphiidae.



Richard Walters

## FILMY DOME SPIDER

*Prolinyphia marginata*

Sheet-web Weavers, Family Linyphiidae

The filmy dome spider is one of the most abundant woodland spiders in Missouri. Although the spider is tiny (3.5-5mm) the snare web, which looks like an upside-down silk bowl, is conspicuous throughout the year. The webs are abundant in rock outcroppings, walls, wood piles and low, dense brush in woodlands, but are rarely found in open areas.

The carapace of this spider is marked with a broad, dark-brown mid-band with white outer margins. The yellowish-white abdomen is wide and high at the back end, with distinctive mottled brown markings.

*Missouri Distribution:* Presumed statewide in woodlands and woodland edges. Commonly found in dense, low vegetation around houses.

**YELLOW GARDEN SPIDER***Argiope aurantia*

Typical Orb Weavers, Family Araneidae

This distinctive spider is often noticed because of its large size and its habit of building webs in gardens and grassy areas near houses. It is most typically found in tall grasslands.

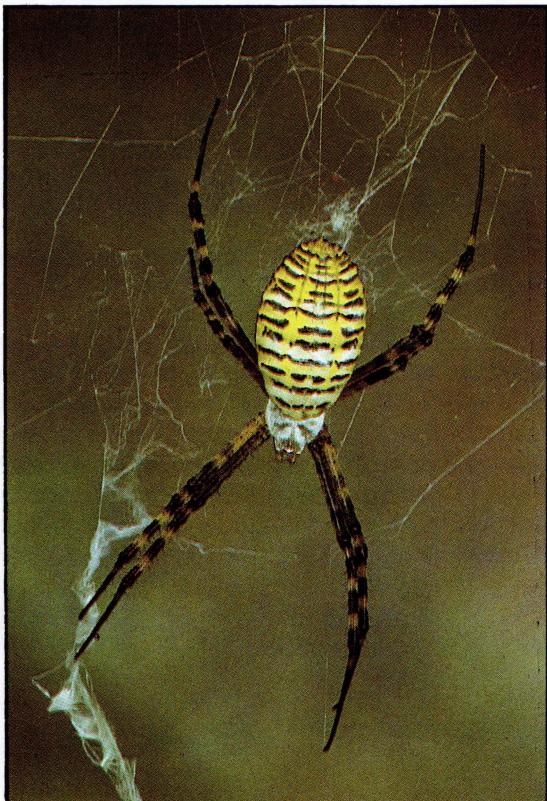
The small cephalothorax is tipped with silver hairs, and the slightly oval abdomen is patterned yellow (sometimes orange) and black. A black mid-stripe with four white spots in the center marks the top of the abdomen. The legs are black with yellow-orange stripes. The upper portion of the legs is more solidly colored orange-yellow. Females are much larger than males and can reach lengths of 19–28mm as compared to 5–8mm for males.

This spider can be found sitting head-down at its web's hub where a zig-zag silk band, the stabilimentum, extends vertically from the center. A variety of insects may fall prey to this spider, especially grasshoppers and katydids. Certain species of smaller spiders use yellow garden spider webs as their own and may feed on the tiny insects caught in the web.

*Missouri Distribution:* Presumed statewide in tall grasslands with tall herbaceous vegetation.



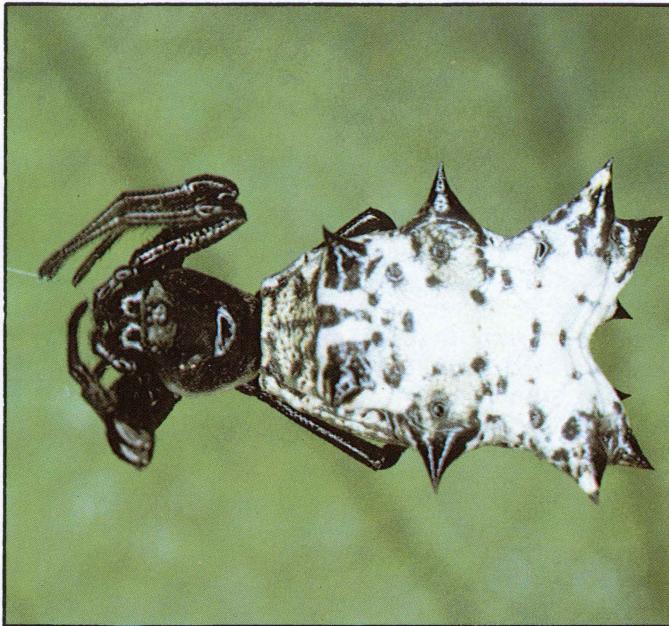
John Moore

**WHITE-BACKED GARDEN SPIDER***Argiope trifasciata*

Typical Orb Weavers, Family Araneidae

At first you may confuse this spider with its close relative, the yellow garden spider. A closer look will reveal a slightly smaller spider with a more sharply pointed back end. The abdomen is patterned with many thin silver and yellow transverse lines and thicker black, spotty lines. The carapace is small and covered with silvery hairs. White-backed garden spider females are larger than the males, ranging from 15–25mm as opposed to 4–5.5mm for the males. Compared to the yellow garden spider, this orb weaver tends to build its web slightly lower in the vegetation. It also is less likely to be found in shade and is more tolerant of open areas with sparse brush. White-backed garden and yellow garden spiders feed on similar prey.

*Missouri Distribution:* Presumed the same as that of the yellow garden spider.



### SPINY-BELLIED ORB WEAVER

*Micrathena gracilis*

Typical Orb Weavers, Family Araneidae

You are almost certain to see this little whitish or yellowish and brown-black mottled spider during woodland walks in August and September. There is a great variation in the color pattern, but its ten-spined, chunky abdomen sets the female spiny-bellied orb weaver apart from all other spiders. The carapace is amber-colored, and the legs are glossy black. Females may grow to a length of 8-10mm. The male lacks the spined abdomen, averages 4.5mm in size and is seldom seen.

The web is a delicate, closely woven orb with a pattern specialized for catching minute flying insects. As with many other orb weavers, this species typically has one very long silk thread leading to a leaf or branch above the web. This is the spider's escape line.

*Missouri Distribution:* Statewide in woodland areas although it is more commonly found in central and southern Missouri, where timber is more extensive.



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### ARBOREAL ORB WEAVERS

*Neoscona* spp.

*Araneus* spp.

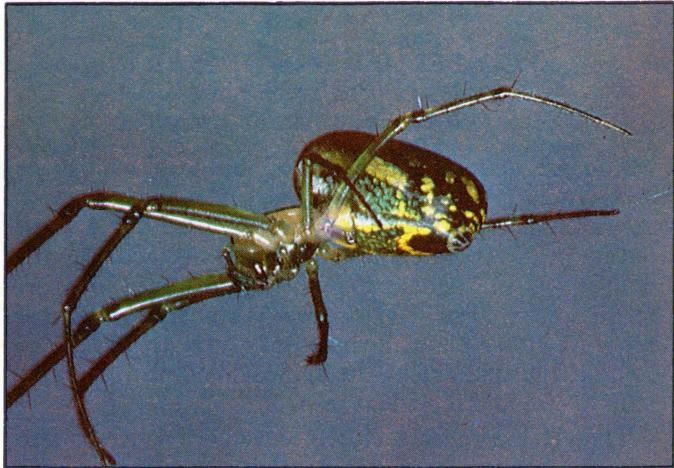
Typical Orb Weavers, Family Araneidae

There are several species of *Neoscona* and *Araneus* orb weavers found in Missouri, and some are quite difficult to distinguish. These rather large and often hairy spiders are common in open woods, brushy fields, in tall grass areas, and around fenceposts and buildings. The average size is 8mm; the male is slightly smaller.

*Neoscona* species have a slightly triangular-ovate abdomen with a light mid-band pattern that resembles an upside-down spruce tree. On each side of this mid-line may be black, brown and greenish-brown markings. The legs usually are gray with brown rings. The carapace may be gray with brown marking. *Araneus* may be similarly marked and colored, though some are quite showy and less hairy.

This orb weaver has the peculiar habit of destroying and rebuilding its inconspicuous web every day. It starts to rebuild the web in the late afternoon and destroys it during the night. Diet consists mainly of nocturnal moths and other insects such as crane flies.

*Missouri Distribution:* Statewide.

**ORCHARD SPIDER***Lecauge venusta*

Typical Orb Weavers, Family Araneidae

These delicate and beautifully colored spiders live in low bushes and damp woodlands. They usually build their small webs in low vegetation, such as lop seed, and sometimes in small trees. Although these spiders may be abundant in wooded areas with dense undergrowth, they are not easily noticed because of their habit of quickly dropping into the leaf litter when disturbed. The carapace appears yellow-green, darker on the sides. The silvery abdomen can be variably colored with greens, yellows, reds and some blues. Males are somewhat smaller than females, which may reach lengths of 5-8mm. The low position of their web helps them to catch small flying insects, such as flies and leafhoppers.

*Missouri Distribution:* Statewide.

**FUNNEL WEB SPIDERS***Agelenopsis* spp.

Funnel Web Weavers, Family Agelenidae

The sheet web up to three feet wide with a funnel is characteristic of these species and is more often noticed than the spider itself. The funnel portion of the web may be over one foot long and leads to shelter—a rock crevice or dense vegetation. These spiders typically build webs several inches above the ground in short grasses and in the window wells of outbuildings.

Funnel weavers hide in the concealed area of the funnel and then dash out onto the sheet portion of the web to capture an insect caught in or walking across the silk platform. Beetles, harvestmen, moths and small butterflies are frequent food items.

A pair of broad, dark, brownish bands runs lengthwise adjacent to a lighter mid-band on the lightly haired and roundish carapace. The legs are cream and dark yellowish-brown. The oblong abdomen is brown with a broad, reddish-brown, zig-zag stripe with a cream-colored border on both sides. The spinnerets are noticeably long. The funnel web spider is a relatively large one, females averaging 10-20mm and males slightly smaller. Two species of funnel weavers are found in Missouri, *A. naevia* and *A. pennsylvanica*. Although the former is usually larger and darker, their similar color patterns make them difficult to distinguish.

*Missouri Distribution:* Presumably statewide.





Dave Tylka

### SPOTTED FISHING SPIDER

*Dolomedes triton*

Nursery Web Weavers, Family Pisauridae

These long-legged, dark-colored water spiders are distinctive in that the oval abdomen is smaller than the broad cephalothorax. The rim stripe surrounding the dark carapace, and sometimes the abdomen, is whitish-yellow. On top of the dark brown abdomen, three distinctive pairs of minute white spots comprise a connect-the-dot pyramid or run mid-line down the back. The brown legs are robust and dotted with white hairs. Females average 17–20mm, males 9–13mm.

Spotted fishing spiders live near ponds or in other damp places. They are able to run across the surface of water much like water striders and will dive for prey, including small tadpoles or aquatic insects. The spider encases its body in an air bubble in order to submerge itself, often for several minutes. The bullfrog is its chief predator.

**Missouri Distribution:** Presumed to occur throughout the state in habitats such as ponds or slow-moving streams and swampy areas.

### TRIANGULATE ORB WEAVER

*Verrucosa arenata*

Typical Orb Weaver Spiders, Family Araneidae

Late summer and fall woodland hikers can count on walking into this spider's web. The triangulate orb weaver's habits are similar to those of the spiny-bellied spider, *Micrathena gracilis*. Its woodland web is small and delicate, and its diet consists of tiny flying insects. This orb weaver probably is less common than the spiny-bellied spider, but it is just as strikingly colored and shaped. The carapace is glossy chocolate-brown and small compared to the similarly colored, triangular abdomen. A triangle of color almost completely covers the top of the abdomen, resembling a white, pink or yellow flattened drop of shiny glue. The females average 9mm, and the males are slightly smaller.

This species is Missouri's only orb weaver that rests centered in its web head-up instead of head-down.

**Missouri Distribution:** Presumed to occur statewide in woodlands.



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## WOLF SPIDERS

*Pardosa* spp.

*Lycosa* spp.

Wolf Spiders, Family Lycosidae

The wolf spider family includes the most common spiders in Missouri as well as worldwide. *Lycosa* wolf spiders vary greatly in size and, although the males are smaller, average 6–25mm. These wandering spiders are encountered in a variety of ground habitats—stream edges, gravel or sand bars, low vegetation and woodland leaf litter. *Pardosa* wolf spiders are usually encountered more commonly in moist habitats such as along ponds, streams or rivers, or on gravel and sand bars.

These spiders make permanent or temporary retreats. Some dig burrows or tunnel into natural cavities under flat rocks or logs. Ground-dwelling insects and other spiders probably make up the bulk of their diet. Wolf spiders are important diet items for small lizards, insectivorous mice, shrews and turkeys.

They are usually colored gray, brown, black or tan with dark brown or black markings (especially stripes) on the carapace and abdomen. Their eye sizes are similar to those of jumping spiders because the two center eyes of the top row are enlarged. Unlike jumpers, however, wolf spiders always have a row of four small eyes below the four larger ones. Wolf spiders run on the ground and may hunt at night; in contrast, jumping spiders hunt in vegetation during the day. Both types have well-developed eyesight and sense of touch.

The female wolf spider attaches an egg sac to her spinnerets and can be seen running across the ground with the sac held in this manner. She will often exhibit aggressive behavior when carrying an egg sac. After the spiderlings emerge from the casing, they climb to her abdomen and remain there for up to two weeks.

*Missouri Distribution:* Statewide.



Donald Kurz

Tom R. Johnson



## RIDGE-FACED FLOWER SPIDER

*Misumenooides formosipes*

Crab Spiders, Family Thomisidae

This small, whitish-yellow or yellowish-brown crab spider is commonly found in flower heads. Often its carapace is slightly greenish, with a broad whitish-yellow mid-band bordered by darker, thinner sides of yellowish-brown. Its eye region may be marked with red, and its legs are uniformly cream-colored. An unmarked abdomen is not unusual, but more typically it is marked with a brownish-yellow V, converging toward the carapace, and made up of various-sized spots or stripes. This spider can change its color to approximate that of its surroundings. Females are larger than males, reaching lengths of 5–11mm; males are 2.5–3mm.

Thousands of minute crab spiderlings lie concealed in spring and summer flower heads, waiting to capture insects with their powerful forelegs. You are more likely to notice them after they have matured, in early autumn fields and pasture lands among plants such as daisy fleabanes, asters and goldenrods. Don't overlook your backyard snapdragons, Queen Anne's lace and marigolds. Insects such as bees, flies and other spiders (especially other crab spiders) make up a large portion of this spider's diet.

*Missouri Distribution:* Statewide in open field and gardens that contain many composite-type flowers.

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### SMOOTH FLOWER SPIDER

*Misumena vatia*

Crab Spiders, Family Thomisidae

Smooth flower crab spiders are often confused with other crab-legged spiders. They are thought to be slightly less abundant than the ridge-faced species yet often can be seen in yellow or white flower heads. They have some capacity to change color from white to yellow, depending upon the blossoms they are inhabiting. As do most flower crab spiders, this species conceals itself among petals and captures flying or crawling insects. The female, ranging in size from 6–9mm, has a white or yellow carapace, darkening somewhat toward the edges, without spines. The eye region can be marked red, as the yellow-white abdomen often is, with two separate stripes extending mid-point around the perimeter of the abdomen. Three small spines are found on the first pair of legs, all of which are light-colored. Smooth flower spider males are spectacularly colored with purple forelegs and a green-yellow carapace. They may reach lengths of 3 or 4mm and are more commonly seen in September and October.

*Missouri Distribution:* Found statewide in prairie, flower fields and mixed grasslands.



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### FOLIAGE FLOWER SPIDERS

*Misumenops* spp.

Crab Spiders, Family Thomisidae

The more obvious differences between *Misumenops* crab spiders and other flower crab spiders is that they generally are smaller, and their carapaces, abdomens and legs are spiny. However, size alone is not a good character for distinguishing crab spider species, for some adults and spiderlings are quite similar in size and appearance. The females are approximately 4–6mm, and the males are slightly smaller.

*M. oblongus* is the easiest spider in this group to identify because it has spines, and the entire body and legs are pale green to silvery white. In *M. asperatus*, the top surfaces of the carapace, abdomen and legs are covered with many spiny hairs, and with greenish-yellow or yellow-brown markings similar to those on the ridge-faced crab spider. *M. celer* markings closely resemble these as well, though its overall coloration often has a light tan-pink cast. All *Misumenops* crab spiders can be found in the same blossoms as noted for *Misumenoides formosipes* but also will be found in grassy habitat.

*Missouri Distribution:* Occurs statewide in prairies, open fields and grasslands with flowering plants.

**XYSTICUS CRAB SPIDER***Xysticus* spp.

Woodland Crab Spiders, Family Thomsidae

There are several species of *Xysticus* spiders found in Missouri and most are larger than the flower crab spiders. They are usually dull gray and brown with brown, white or yellow markings, especially on the abdomen. These spiders can be found under bark and on the forest floor under leaves, rocks and on decaying logs. You can sometimes find them on low fenceposts, flowering plants and out-buildings. The first pair of legs are large and powerful, as in flower crab spiders, and are covered with many tiny spines. Female *Xysticus* crab spiders range from 5–10mm; males average 4mm.

Woodland crab spiders are not easily seen because of their cryptic coloration but nevertheless are fairly common. Moths and butterflies make up the bulk of their insect prey.

*Missouri Distribution:* Statewide.

**WHITE-SPOTTED JUMPING SPIDER***Phidippus audax*

Jumping Spiders, Family Salticidae

These large, black-bodied jumping spiders are often found on broad-leaved plants such as milkweed and on tree trunks, fenceposts and house or barn siding. The cephalothorax is larger than the oval abdomen and solidly colored black or reddish-brown. There are often several spots on top of the abdomen, a central spot being the largest. Females reach lengths of 8–15mm. Males may grow to 13mm but more commonly average 6–12mm.

All jumping spiders have a flattened eye region with two large eyes set close together among six other, smaller eyes. These spiders depend much upon their sense of sight to hunt or to court females. For this reason, many jumping spiders have iridescent markings or colors on their bodies, legs and chelicerae. In *P. audax*, the chelicerae are iridescent green. Bugs, caterpillars and other spiders appear to be among the preferred prey.

*Missouri Distribution:* Presumed to occur statewide.

Dave Tylka

**TREE TRUNK SPIDER***Metacyrba undata*

Jumping Spiders, Family Salticidae

This spider has fuzzy pedipalps, usually white. The tree trunk spider generally is gray, with flecks of black, white and sometimes reddish hairs. Its color pattern is quite variable. Some individuals have a zebra-like look while others appear more uniformly gray.

These flat-bodied jumping spiders are typically found on fenceposts, tree trunks (especially shagbark hickories) and building walls. They often are seen on walls inside houses in late autumn. Their food items include flies, aphids, moths and other spiders.

*Missouri Distribution:* Known to occur statewide, though more commonly noticed near hickory woodlands.

Tom R. Johnson



**BLACK WIDOW SPIDER***Latrodectus mactans**Latrodectus variolus*

Comb-Footed Spiders, Family Theridiidae

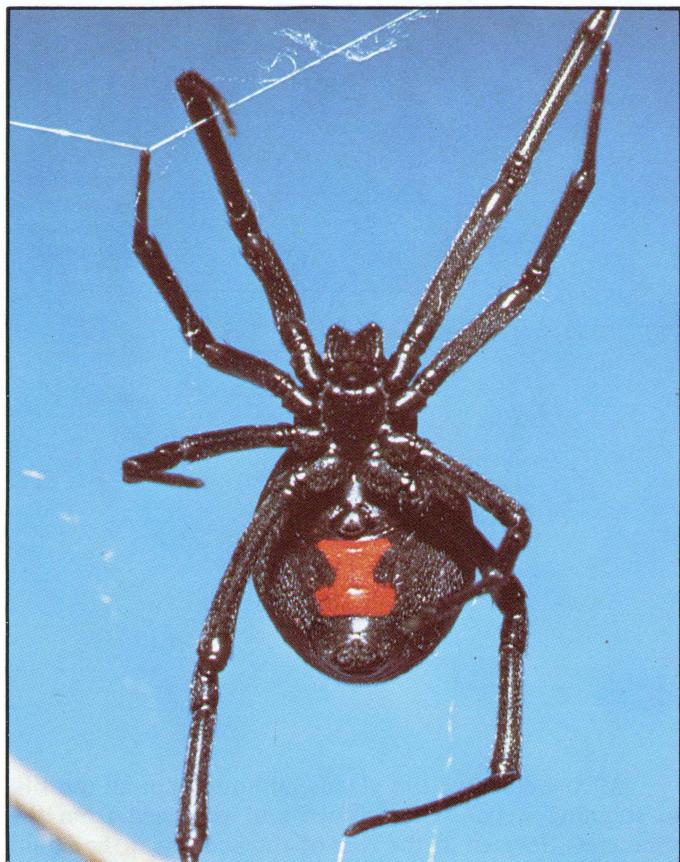
The glossy, black-bodied female widows have distinctive red spots on the underside of their abdomens. In *L. mactans* this spot often is shaped like an hourglass; in *L. variolus* it is not. Faint red or white spots may also appear on top of the abdomen, as they do in males. The large females reach lengths of 8-10mm while males grow to less than half this size.

The sedentary female black widow is capable of inflicting a potentially dangerous bite, not the wandering and seldom-seen male. This timid arachnid often flees from disturbance but will bite if consistently provoked.

The black widow most often makes its irregularly shaped web under flat rocks, logs, along embankments or in outbuildings. The web has a tiny funnel into which the spider can retreat if bothered. *L. variolus* makes its web in open woods. The black widow's prey includes flying and climbing insects that become entangled in its web.

A black widow spider bite often results in delayed pain at the wound site. Severe abdominal cramps, muscle tightness or soreness, headache, nausea and sweating usually follow. Swelling may be noticed in the hands, feet or eyelids, but usually not at the bite site. Discomfort can last several days and may be relieved through medical treatment. It is unusual for a widow bite to cause death.

**Missouri Distribution:** Both species occur statewide, although *L. mactans* is more common in southern counties.

**VIOLIN OR BROWN RECLUSE SPIDER***Loxosceles reclusa*

Venomous Six-Eyed Spiders, Family Loxoscelidae

The overall color is usually a grayish-yellow-brown, the oblong abdomen covered with gray hairs. The broad cephalothorax appears almost heart-shaped with a characteristic violin-shaped marking on top of the carapace. The legs are darker and are long and slim. Females are slightly larger than males, averaging 9mm.

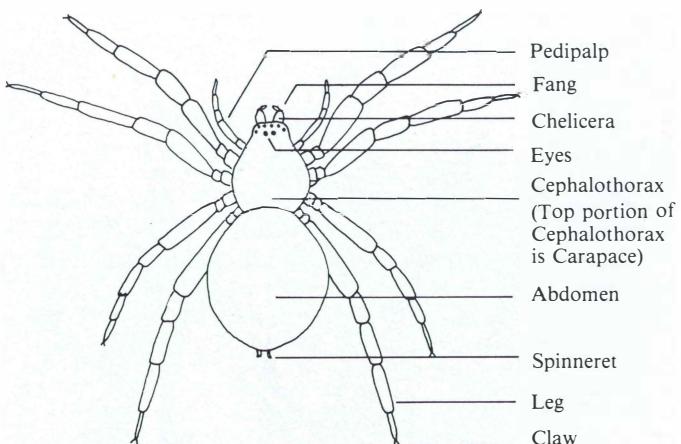
The violin spider shares its venomous notoriety with the black widow spider, but both sexes are poisonous. These spiders and their small, irregular, untidy webs can be found under rocks and stones in the southern Ozarks but are more often encountered indoors in little-used drawers, closets and other small hiding places. They cannot negotiate smooth surfaces and are often found in bathtubs and sinks, unable to escape. They may live for several years. Diet preferences probably include small, crawling insects.

When bitten by a brown recluse spider, most individuals take little, if any, notice. Swelling, redness and tenderness at the bite area may occur after eight hours or less, followed later by chills, nausea or fever. Many people do not even experience these symptoms or do so in highly variable manners. More commonly, after several days the skin surrounding the bite may begin to ulcerate, eventually forming a deep, open wound that is slow to heal and susceptible to infection. Should you experience a wound as described, see a doctor. Death from a violin spider bite is extremely unlikely.

**Missouri Distribution:** This species has gradually spread northward and is now presumed to occur statewide, indoors.



Richard Walters



### A Generalized Spider

All spiders have silk glands, although not all use silk in spinning webs. When drawn and stretched from the spinnerets, located at the rear of the abdomen, the liquid silk solidifies into tiny strands that are both strong and elastic. It may require more than 80 grams of stress to break a thread of silk only .1mm in diameter. Spiders use silk for web-building, for capturing prey, for sperm transfer, for lining hibernating, molting or living chambers and constructing egg cases, for draglines and mating bowers, and spiderlings use silk for windborne travel.

Many people dread the thought of a spider bite, but few in the United States die from them. Relatively few spiders are capable of piercing human skin. While it is true that most spiders have venom, the toxicity varies with the species. Most spider venom is harmless to humans but may cause temporary skin discoloration or swelling, much like a mosquito bite. Large spiders are capable of inflicting a painful bite but rarely do so unless consistently provoked. Spiders generally flee upon human approach, contrary to the tales of science-fiction writers.

Of the two potentially harmful spiders found in Missouri, you are more likely to encounter the brown recluse than the black widow. Both can inflict bites which, though rarely fatal, can cause severe pain and infection. Nationally, fewer than five people per year die from black widow bites, and it is highly unusual to find fatal brown recluse bite cases. Deaths attributed to spiders usually occur in individuals who have an extreme allergic reaction or immune deficiency to the spider's venom.

Although the chance of being bitten by a venomous spider is extremely slim, you can reduce the likelihood by heeding the following:

—Keep away from areas where black widow or brown recluse spiders are known to concentrate. The widow often makes tangled webs around outbuildings, storage units, old tree trunks or cabins not in regular use.

—Keep cellars, rooms, closets as clean and clutter-free as possible. These spiders usually will not remain in a constantly disturbed area. This rule can provide a powerful incentive for children to clean their rooms.

—Shake clothing, blankets, towels, and such if they have remained in an area where these spiders may be found.

—Take care to look before placing your hands in a lumber pile, window-well, under rocks or in little-used cabinets or drawers.

—Professional pest-control agents and sprays can be used, but these are often expensive and generally unsuccessful. The spiders are tenacious and not highly susceptible to insecticides.

—Do seek medical attention if you suspect that you have been bitten by either a brown recluse or black widow. However, with most spider bites, victims do not even know they have been bitten. If they do notice, they often attribute the spot to a scratch or splinter.

Collecting spiders is a good way to gain a greater appreciation and understanding of spider natural history. If you hunt with a camera, you may capture some splendid photographs of these colorful and unusual creatures.

Many spiders are active at night and can be found by shining a flashlight into vegetation. Wolf spider eyes reflect light, causing a night meadow to appear to twinkle.

Arachnids can be captured easily using small glass vials. You can also use a pillow case or canvas net to sweep vegetation, or to place under bushes as you shake them.

Collection for scientific, school or personal research sometimes requires the preservation of specimens in 70-percent ethyl or rubbing alcohol. If you pursue such studies, remember to make careful notes of the spider's location (on plants, rocks, soil, etc.), habits, appearance and coloration prior to capture, and any further information that may help you to identify your specimen. Remember, although specific spider identification can be difficult, the broad categories are more easily distinguished.

Spiders have been residents of the earth for 400 million years. Primitive spiders found preserved in amber look remarkably similar to our present-day species. Whether the prospect of observing these eight-legged creatures excites you or not, one thing is certain—spiders are here to stay. □

### BOOKS AND ARTICLES ABOUT SPIDERS

*A Golden Guide to Spiders and Their Kin* by Herbert Levi, Golden Press, 1968.

*How to Know the Spiders* by B.J. Kaston, William C. Brown, 1972.

*American Spiders* (2nd Edition) by Willis J. Gertsch, Ph.D., Van Nostrand Reinhold, 1979.

“Fear Not, Miss Muffet!” by David Tylka, *Missouri Conservationist*, October 1982.

“Don’t Fiddle with Fiddleback” by Warren P. Sights, M.D., *Missouri Conservationist*, February 1983.

*Poisonous Spiders* by Curtis Wingo, Agricultural Experiment Bulletin No. 738, University of Missouri, 1975.